

**Manhattan**<sup>®</sup>  
TECHNOLOGY WITH VISION

## Digital Satellite Meter



### **DSM-4S**

### **Instruction Manual (English)**

[www.eurosat.com](http://www.eurosat.com)

Issue 1

Thank you for your purchase of the DSM-4S, should you require further assistance with its use it is suggested that you initially contact your supplier with enquiries as many queries can be diagnosed via email or by phone.

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## OVERVIEW

The latest development in satellite identification technology has been packed into the Eurosat Manhattan DSM-4S satellite meter. The DSM-4S makes finding your satellite quick and easy with its unique satellite direction indicator system and unique satellite identification with lock indication.

- All the accessories you need come complete with your meter so that it is ready to use out of the box.
- The clear and easy to read display ensures a excellent dish alignment every time.
- The DSM-4S does not require batteries as it runs from your satellite receiver.
- Full support and update download packs are available as free downloads.

## PLEASE NOTE

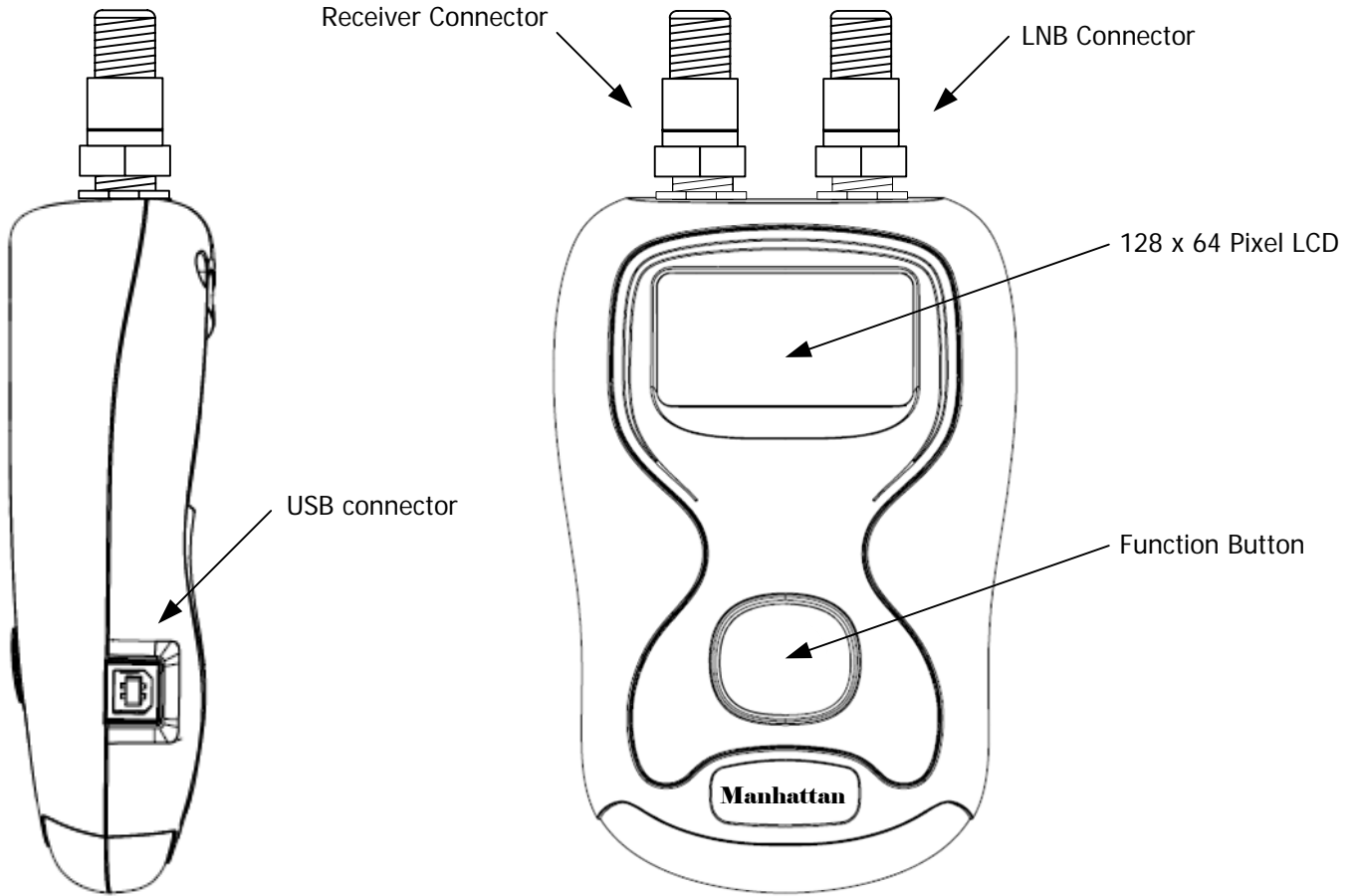
**The DSM-4S is a satellite finding device it is not designed to be permanently left in line between your LNB and set top box. Once the installation is complete remove your DSM-4S and re-connect the LNB to the receiver.**

## SPECIFICATIONS

- Easy to use one button operation
- Small and light weight
- No batteries required
- Positive satellite identification
- Clear backlit 128 x 64 pixel LCD display
- USB Interface
- Downloadable updates
- Automatic USB driver installation
- 1 metre F-F connecting lead supplied
- USB cable included
- Frequency range 950 to 2150 MHz
- Unique satellite direction indicator
- Carry case included

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## YOUR DSM-4S



## ACCESSORIES

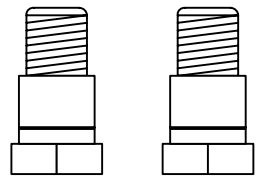
Everything you need is supplied with your DSM-4S including a USB cable for updates and a F to F lead for connecting to your LNB.



**USB Lead**



**F - F Cable**



**Port Savers**

Replacements for both these items are available directly from Eurosat Ltd.

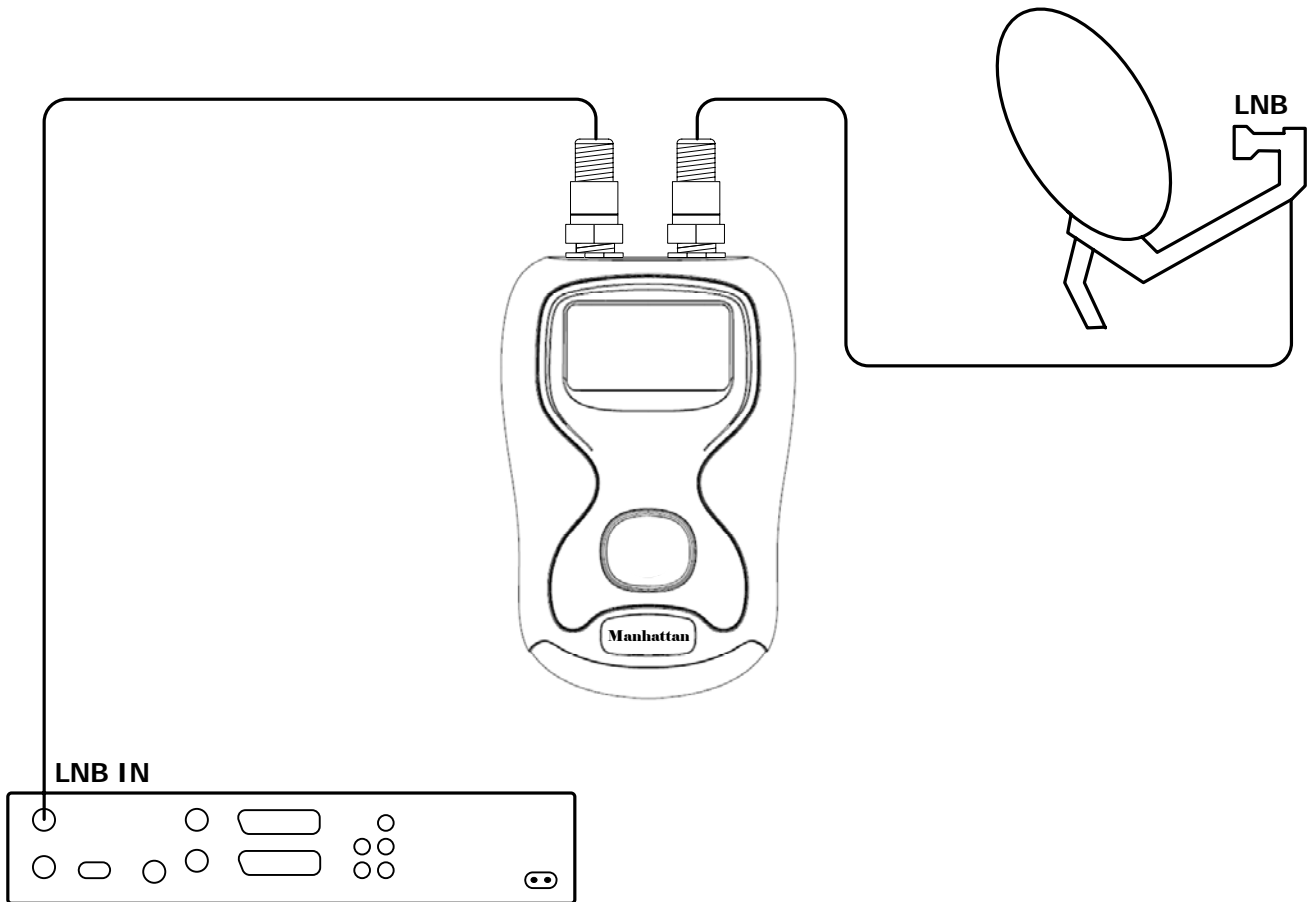
**Note:** The Port Savers (fitted) must remain fitted at all times.

**Note:** Should a Manhattan DSM-4S be returned to Eurosat Ltd the Port Savers must be fitted as removal will invalidate the warranty.

## CONNECTIONS

Your DSM-4S is ready to use straight out of the box. How to connect your meter is illustrated below.

**Note:** Always make all of your connections prior to switching your DSM-4S on.



For the easiest method of connection disconnect the cable from the LNB on your dish and connect this to the Set Top Box (receiver symbol) connector on your DSM-S4. Then use the short F cable supplied with your DSM-S4 to connect your LNB (dish symbol) connector to the LNB as shown above.

After your connections have been completed ensure that your set top box is switched on with any channel selected. **Tip:** Ensure that the F connectors are hand tight and not loose (good connections are essential).

## FINDING SATELLITES

Now that you have connected your DSM-S4 you are ready to find some satellites. Your DSM-S4 will be pre-loaded with a selection of satellites. These selections can be changed by downloading different region packs from the Eurosat web site.

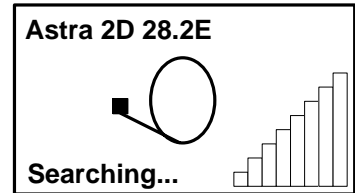
In the following examples we will be looking at the European pack of satellites which comprises of the following...

Astra 2A 28.2' East	European Beam
Astra 2D 28.2' East	UK Spot Beam
Astra 1 19.2' East	European Beam
Hotbird 13.0' East	European Beam

**Note:** Beam refers to where this satellite is available Astra 2D has a narrow beam focused over the UK for local network services specific to the United Kingdom.

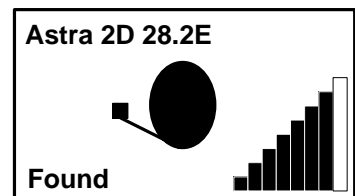
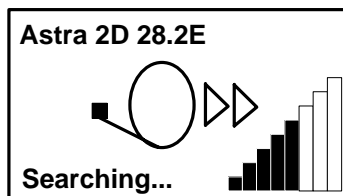
Switch on your DSM-S4 by holding the function button. After the start up has completed you will be presented with the satellite finding mode. Press the function button until your desired satellite from the pre-loaded pack is displayed. To switch the DSM-S4 off press and hold the function button.

**Tip:** For locations above the equator (Europe for example) satellites will be located on the Southern horizon, with the use of a compass we can quickly eliminate half of the visible sky, for the European satellites we can further reduce our search area by focusing on the South East region of the visible sky as the European satellite pack pre-loaded into your DSM-S4 is looking for satellites in this region.

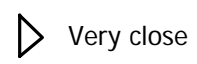
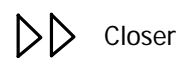
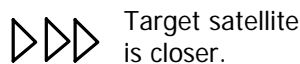
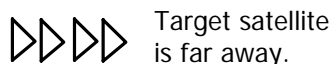


Satellite finding is best done with the following technique. Ensure that your satellite dish is mounted on its fixings so that the bolts are biting just enough to allow you to move the dish and it will hold its position in both Elevation and Azimuth (side to side and up and down motion). Also the LNB clamp should be tight enough to hold the LNB in place when you are adjusting the skew (clockwise and counter-clockwise rotation of the LNB). Some LNB's have a 5 position adjuster for this purpose and come with the LNB skew preset (typically on small dishes) as supplied by the satellite service operator.

Point your dish slightly downwards so that the face is about 5 to 10 degrees off vertical and slowly move your dish from east to west across the horizon in a slow smooth motion keeping an eye on your meter display. On reaching the end of each sweep tilt the dish back a little (raising the elevation) and sweep back again in the same slow smooth manner. You will notice that the signal level display will rise and fall as you pass different satellites. When you are getting close to your selected satellite the unique satellite direction finding system will display arrows telling you which way to move your dish (from the perspective of standing behind your dish).



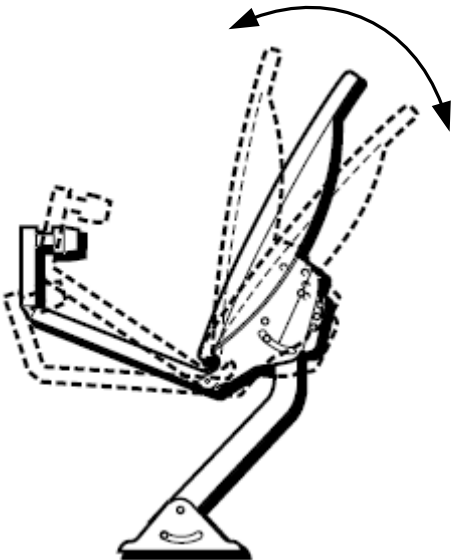
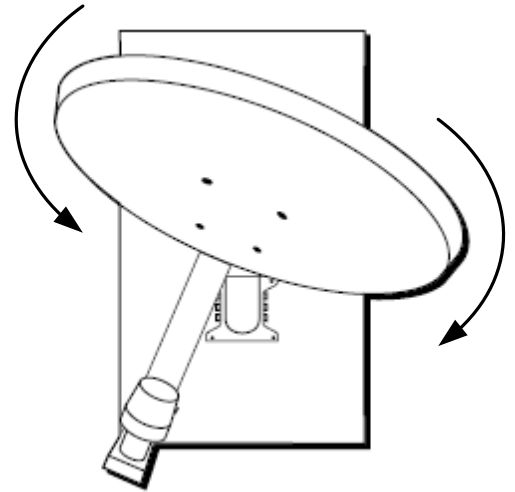
The Unique arrow system tells you that you are getting closer to your satellite in a countdown style.



Once you have found your satellite the satellite dish icon will be come solid and a melody will play, the word "Found" will also appear in the lower left corner of the LCD display. On locating your satellite you can further peak the signal by following the steps on the next page, to improve the performance of your satellite system.

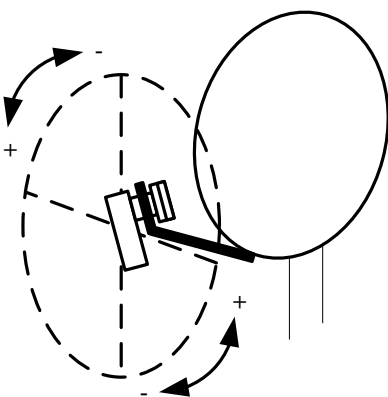
## IMPROVING YOUR SIGNAL

Now that you have acquired your satellite follow these steps to further improve your signal. While the display is showing found move the dish very slowly off the target satellite in either a left or right direction (Azimuth adjustment) until the signal level just starts to drop away and make a mental note of the position of your dish, now move the dish back in the opposite direction watch where the signal level peaks and continue until the level just starts to drop off again. Now move your dish back to the centre of these two points (the azimuth is now optimised). Tighten the clamp bolts to lock the azimuth position.



We can apply the same procedure to the up and down motion (Elevation adjustment), again we are looking to see where the signal just starts to fall away and move while moving up in elevation make a mental note of that position and then adjust the elevation down until the signal level just starts to drop off again. Then return your elevation position to the centre of these two points (the elevation is now optimised). Tighten the elevation bolts.

The final step for making fine adjustments to optimise your signal is the polarisation of the LNB (adjusting the skew). Depending on the style of dish you own this can take two different forms. One adjusting the skew of the whole dish (via a mounting plate on the rear of the dish) or two rotating the LNB clockwise or counter-clockwise in the LNB clamp. For the United States it is common to have the former (whole dish is rotated) where as in Europe and the rest of the world it is typically the latter (rotating the LNB in its clamp).



We can apply a similar procedure for the skew adjustment, again we are looking to see where the signal just starts to fall away and move while rotating the LNB (or dish assembly) make a mental note of that position and then adjust the skew in the opposite direction until the signal level just starts to drop off again. Then return your skew position to the centre of these two points (the polarisation is now optimised). Tighten the LNB clamp.

Following the procedures above will greatly improve the performance of your dish, and over time your familiarity with installing your own dish will enable you to complete this procedure quickly.

## REMEMBER

**The DSM-4S is a satellite finding device it is not designed to be permanently left in line between your LNB and set top box. Once the installation is complete remove your DSM-S4 and re-connect the LNB to the receiver.**

## SOFTWARE UPDATES

From time to time it may be necessary to update the satellite selections on your DSM-4S satellite meter or you may wish to download an alternative satellite pack from the Manhattan web site. Before proceeding to download new or updated settings please insure that the USB drivers are correctly installed, this is usually an automatic process (as described below) but the drivers can also be manually downloaded and installed if required. For the automatic driver installation to take place your PC must be connected to the internet.

Connect your DSM-4S to your PC with the USB interface lead supplied. The Found new hardware balloon will pop-up in the lower left of your windows task bar.



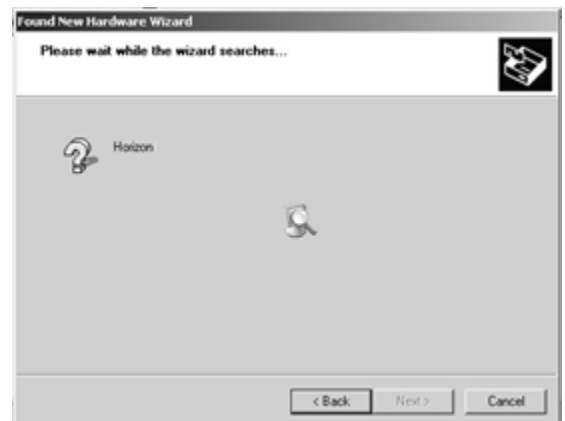
In the Found New Hardware Wizard select "Yes, this time only" and click on the "Next >" button.



Next select "Install the software automatically" and click on the "Next >" button.



While your PC is searching for and downloading the required drivers the installation wizard window will look like this. This operation may take a few seconds to complete.



Continued...

The first stage of the driver installation is now complete click "Finish" to continue the installation.



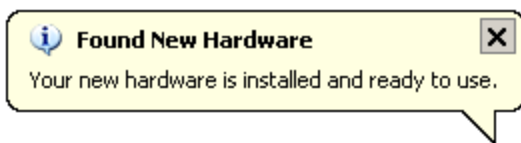
The Found New Hardware Wizard will appear again to install the second driver required.



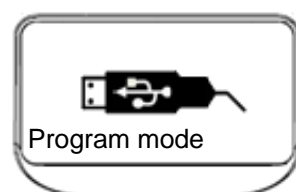
Select "Install the software automatically" option and click on "Next >".



Your PC will then search for the driver required. Once this stage of the installation is complete click on "Finish" and a notice balloon will appear to inform you that your driver installation is complete.



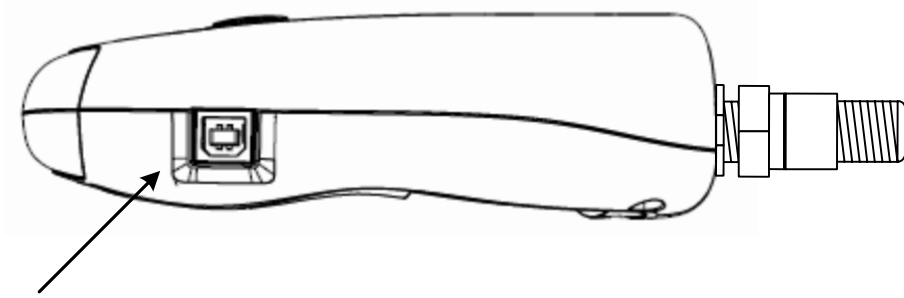
Check to see that your DSM-4S is now in program mode as illustrated on the right and you are then ready to update you DSM-4S with your new satellite selections downloaded from the Manhattan web site.





## DOWNLOADS

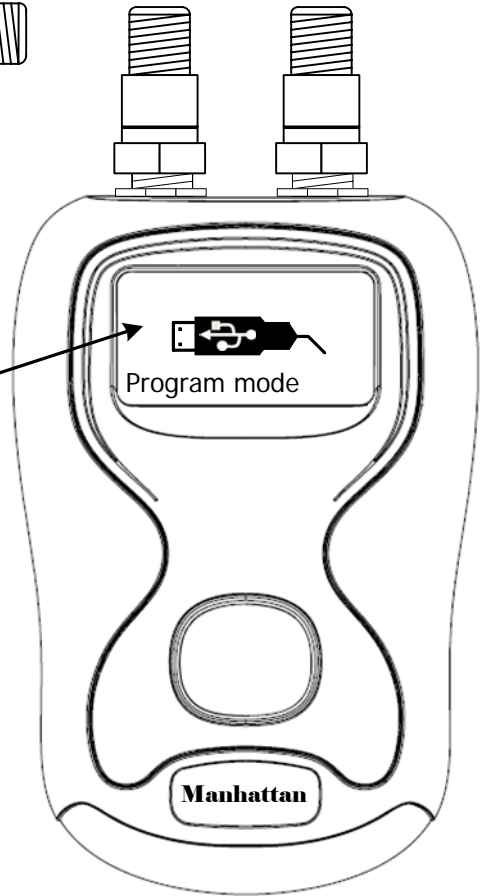
To update or load your selected satellite file to your DSM-4S meter connect your meter via USB to your PC.



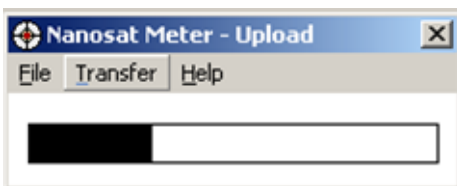
The USB port is located on the lower right side of the casing.

On connecting the DSM-4S to your PC the LCD will flash a few times and settle into program mode after a few seconds (as shown in the diagram on the right).

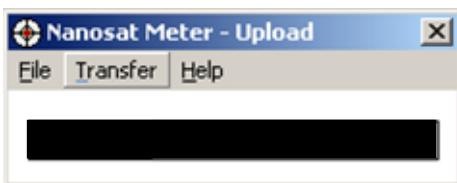
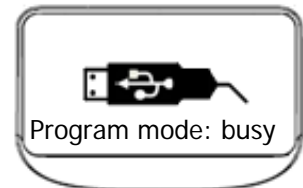
Double click the target style icon to open the loading program and follow the steps below.



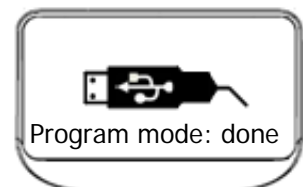
Click **T**ransfer



While the data transfer is taking place the LCD text will indicate that the NanoSat is **"busy"** receiving data.



On completion the LCD text will indicate **"done"**



Click **"OK"** and disconnect the DSM-4S from your PC your meter is now ready for use with the selection you downloaded.

**NOTES**

NOTES

## LIMITED WARRANTY

Eurosat will, at our option, repair or replace any Manhattan DSM-4S Digital Satellite Meter found to be defective in manufacture within the warranty period (1 year).

The warranty period is determined by the date of DSM-4S purchase.

Keep your receipt as proof of purchase.

Otherwise the warranty is determined by date of manufacture.

This warranty does not apply to damage caused by accident, misuse, or tampering with the unit or seals. This does not affect your statutory rights.

## DECLARATION OF CONFORMITY

Manufacturer: Horizon Global Electronics Ltd.

Declares that the Eurosat Manhattan DSM-4S complies with the following directives and standards.

Safety EN610 10-1:2001

EMC 61326:1997

All Horizon Global Electronics products are ROHS compliant.

Technical Department  
Horizon Global Electronics Ltd.  
November 2009



## CONTACT DETAILS

Eurosat (Trade) act as the UK Distribution Agent for this range and similar products, they can be contacted regarding further and other issues at the address below.

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